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ARMY DUGWAY PROVING GROUND UTAH

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FIELD KEY TO ADULT RABBITS AND RODENTS OF THE BONNEVILLE BASIN --ETC(U)

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TECHNICAL REPORT

FIELD KEY TO ADULT RABBITS AND RODENTS  
OF THE  
BONNEVILLE BASIN OF WEST CENTRAL UTAH

BY

ROBERT E. ELBEL

HAROLD E. STARK

APRIL 1978

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FIELD KEY TO ADULT RABBITS AND RODENTS OF THE BONNEVILLE BASIN OF WEST  
CENTRAL UTAH

Robert E. Elbel<sup>1</sup> and Harold E. Stark<sup>1</sup>

FOREWORD

This simple key provides a quick and reliable means of identification of rabbits and rodents obtained during ecology studies in the Bonneville Basin of west central Utah. The key, first developed in 1964, has been simplified by years of field use. Differentiating characters are not illustrated in this key because adequate illustrations are available in such commercially published field guides as Burt and Grossenheider.<sup>2</sup> Carnivores, occasionally obtained during studies, are easily identified using that guide. Egoscue in his "Checklist of Mammals of Tooele County, Utah"<sup>3</sup> listed 5 lagomorphs and 32 rodents, but only 4 lagomorphs and 25 rodents are identified in this field key. Additional species either do not occur in the area under consideration or could not be trapped using the methods employed.

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<sup>2</sup>Burt, W.H. and R.P. Grossenheider, Field Guide to the Mammals, Houghton, Mifflin Co., Boston, MA, 1964, 284 p.

<sup>3</sup>Egoscue, H.J. "Checklist of the Mammals of Tooele County, Utah", p. 233-237, Study of the Ecology and Epizootology of the Native Fauna of the Great Salt Lake Desert - 1969, University of Utah, 1970, 246 p.

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# FIELD KEY TO 29 SPECIES OF ADULT RABBITS AND RODENTS<sup>1</sup>

[Species names as listed in Egoscue (1970): Names of common species are capitalized]

1. Tail shorter than ear . . . . . LAGOMORPHA . . . . . 2  
Tail longer than ear . . . . . RODENTIA . . . . . 5
2. LAGOMORPHA:  
Hind foot over 4 1/8 inches  
(105mm); tail black . . . . . *LEPUS CALIFORNICUS*  
(BLACK-TAILED JACKRABBIT) p. 197<sup>2</sup>  
Hind foot under 4 1/8 inches  
(105mm) . . . . . Cottontails . . . . . 3
3. Cottontails:  
Tail brown below . . . . . *Sylvilagus idahoensis*  
(Pigmy Rabbit) . . . . . p. 216  
Tail white below . . . . . 4
4. Ear densely haired inside,  
under 2 3/4 inches (70mm) . . . *Sylvilagus nuttallii*  
(Nuttall Cottontail) . . . p. 216  
Ear sparsely haired inside  
over 2 3/4 inches (70mm) . . . *SYLVILAGUS AUDUBONII*  
(DESERT COTTONTAIL) . . . p. 216
5. RODENTIA:  
Tail with hair at middle long. . Sciuridae . . . . . 6  
Tail with hair at middle short  
(except Bushy-tailed Wood Rat) . . . . . 12

<sup>1</sup>Modified from M. Raymond Lee (Univ. of Utah, Unpubl.) "Key to the Mammals of Utah" and suggestions from H.J. Egoscue, E.L. Morse, and J.D. Colanto, formerly University of Utah.

<sup>2</sup>Page numbers refer to Burt and Grossenheider (1964)

6. Sciuridae:

Side of head not striped . . .	Squirrels . . . . .	7
Side of head striped . . . . .	Chipmunks . . . . .	10

7. Squirrels:

Body without dorsal white stripes . . . . .	8
Body with dorsal white stripes . . . . .	9

8. Body gray mottled with cinnamon or brown; tail over 6 inches (153mm) . . . . .	<i>Spermophilus variegatus</i> (Rock Squirrel) . . . . .	p. 101
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Body uniformly dark; tail under 3 inches (76mm) . . . . .	<i>Spermophilus townsendii</i> (Townsend Ground Squirrel) . . . . .	p. 103
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9. Tail red below . . . . .	<i>Spermophilus lateralis</i> (Golden-mantled Ground Squirrel) . . . . .	p. 116
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Tail white below . . . . .	<i>AMMOSPERMOPHILUS LEUCURUS</i> (WHITE-TAILED ANTELOPE SQUIRREL) . . . . .	p. 116
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10. Chipmunks:

Body with stripes indistinct except for dark stripe down middle of back . . . . .	<i>Eutamias dorsalis</i> (Cliff Chipmunk) . . . . .	p. 116
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Body with dorsal stripes distinct . . . . .	11
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11. Body with dorsal white stripes bordered each side by black or brown stripe; head and body under 4 3/4 inches (121mm) . .	<i>EUTAMIAS MINIMUS</i> (Least Chipmunk) . . . . .	p. 116
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Body with dorsal white stripes not bordered below by dark stripe; head and body over 4 3/4 inches (121mm); above 7,000 feet (2134m) . . . . .	<i>Eutamias umbrinus</i> (Uinta Chipmunk) . . . . .	p. 121
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12.	Mouth with external fur-lined cheek pouches . . . . .	Heteromyidae . . . . .	13
	Mouth without external fur-lined cheek pouches . . . . .		18
13.	Heteromyidae:		
	Hind foot with sole nearly naked . . . . .	Pocket Mice . . . . .	14
	Hind foot with sole haired . .	Kangaroo Rats and Mice . .	16
14.	Pocket Mice:		
	Tail distinctly crested with bushy tuft at tip; pelage gray and coarse; ear pointed at tip	<i>PEROGNATHUS FORMOSUS</i> (LONG-TAILED POCKET MICE)	p. 148
	Tail not distinctly crested; tip only slightly tufted; pelage buffy and soft; ear rounded at tip . . . . .		15
15.	Smells like popcorn; hind foot over 3/4 inch (20mm) . . . . .	<i>PEROGNATHUS PARVUS</i> (GREAT BASIN POCKET MOUSE).	p. 148
	Hind foot under 3/4 inch (20mm)	<i>Perognathus longimembris</i> (Little Pocket Mouse)	p. 140
16.	Kangaroo Rats and Mice:		
	Tail not tufted, middle swollen; head and body less than 3 inches (7.6cm) . . . . .	<i>Microdipodops megacephalus</i> (Dark Kangaroo Mouse)	p. 147
	Tail tufted at tip, middle not swollen; head and body more than 4 inches (10cm) . . . . .		17
17.	Lower teeth narrow, rounded across front; tail usually with dorsal dark stripe wider than ventral which tapers out before tip . . . . .	<i>DIPODOMYS ORDII</i> (ORD KANGAROO RAT)	p. 149



- Lower teeth wide, flat across front, tail usually with dorsal dark stripe about same width as ventral which continues to tip; insides of cheek pouches often blackish . . . . .
- DIPODOMYS MICROPS*  
(CHISEL-TOOTHED KANGAROO RAT) . . . . . p. 154
18. Tail naked and scaly; hind foot under 7/8 inch (22mm) . . . . . Muridae. *Mus musculus*  
(House Mouse) . . . . . p. 164
- Tail covered with hair . . . . . Cricetidae . . . . . 19
19. Cricetidae:
- Hind foot over 1 1/8 inches (28mm) . . . . . Wood Rats . . . . . 20
- Hind foot under 1 1/8 inches (28mm) . . . . . . . . . . 21
20. Wood Rats:
- Tail bushy, squirrel-like; usually above 7,000 feet.(2134m) *Neotoma cinerea*  
(Bushy-tailed Wood Rat) . . p. 181
- Tail not bushy; usually below 7,000 feet.(2134m) . . . . . *NEOTOMA LEPIDA*  
(DESERT WOOD RAT) . . . . . p. 181
21. Ears sparsely furred, conspicuous above hair . . . . . Cricetinae . . . . . 22
- Ears thickly furred, nearly hidden in hair . . . . . Microtinae . . . . . 26
22. Cricetinae:
- Tail less than half the length of head and body . . . . . *Onychomys leucogaster*  
(Northern Grasshopper Mouse) . . . . . p. 164
- Tail more than half the length of head and body . . . . . . . . . . 23
23. Upper teeth grooved . . . . . *REITHRODONTOMYS MEGALOTIS*  
(WESTERN HARVEST MOUSE) . p. 164
- Upper teeth not grooved . . . . . . . . . . p. 24

24. Tail tufted at tip, not sharply  
bicolored, more than 90 percent  
length of head and body; nose  
pointed like a fox; male with  
wedge-shaped penis . . . . . *PEROMYSCUS CRINITUS*  
(CANYON MOUSE) . . . . . p. 165
- Tail not tufted, but sharply  
bicolored; male with pointed  
penis . . . . . 25
25. Ear under 7/8 inch (22mm),  
shorter than hind foot; tail  
less than 90 percent length  
of head and body . . . . . *PEROMYSCUS MANICULATUS*  
(DEER MOUSE) . . . . . p. 165
- Ear over 7/8 inch (22mm), longer  
than hind foot; tail more than  
90 percent length of head and  
body . . . . . *PEROMYSCUS TRUEI*  
(PINYON MOUSE) . . . . . p. 165
26. Microtinae:
- Tail about the same length as  
hind foot; body gray . . . . . *Lagurus curtatus*  
(Sagebrush Vole) . . . . . p. 180
- Tail more than 1 1/2 times  
length of hind foot; body  
brownish gray to black above. . . . . 27
27. Second upper molar with four  
closed triangles and rounded  
posterior loop; Timpie Springs  
east to Lake Point . . . . . *Microtus pennsylvanicus*  
(Meadow Vole) . . . . . p. 180
- Second upper molar with four  
closed triangles without  
posterior loop . . . . . 28
28. Tail more than 40 percent length  
of head and body . . . . . *Microtus longicaudus*  
(Long-tailed Vole) . . . . . p. 194
- Tail less than 40 percent length  
of head and body . . . . . *Microtus montanus*  
(Montane Vole) . . . . . p. 192

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